

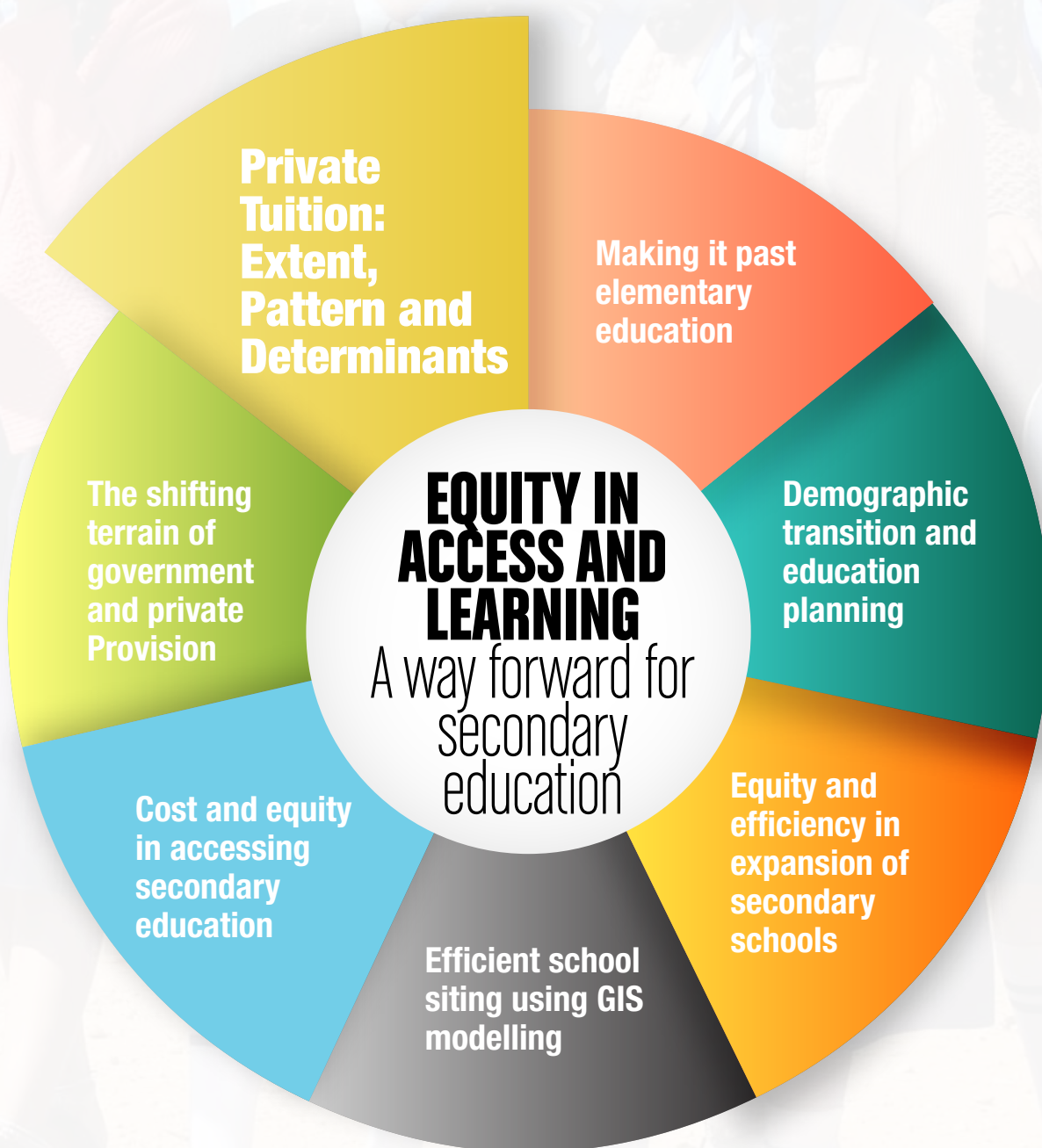


**MHRD**

Government of India  
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RESEARCH  
REPORT  
**VII**

# Private Tuition: Extent, Pattern and Determinants



**RMSA-TCA**  
Rashtriya Madhyamik Shiksha Abhiyan  
Technical Cooperation Agency

## Preface

This document is one of a series of seven research reports which has been prepared to accompany the single consolidated recommendation report *Equity in Access and Learning: A Way Forward for Secondary Education in India*. The research reports are intended to be of interest to planners, managers and policy makers, as well as to academics involved in development of policies and plans for secondary education. In addition to these reports, a research priority framework and research quality assessment framework has also been developed to take this research agenda forward.

The research programme was developed by the Rashtriya Madhyamik Shiksha Abhiyan-Technical Cooperation Agency (RMSA-TCA) in discussion with National University of Educational Planning and Administration and the Ministry of Human Resource Development (MHRD). The research was developed to respond to concerns expressed in the Joint Review Missions (JRM) to strengthen the evidence base for diagnosis of issues arising during the implementation of RMSA, and to inform policy dialogues on options that could increase access, efficiency, effectiveness, and equity.

The rising demand for private tuition has clear implications for efforts to achieve equity in access to education and high levels of learning for all. This paper explores the degree of prevalence of private tuition, the profile of students who use it, and the reasons for accessing it - or the determinants of uptake of tuition.

The eight research reports in this series are as follow:

<b>Research Report 0:</b> <i>(Consolidation)</i>	<b>Equity in Access and Learning: A Way Forward for Secondary Education</b>
<b>Research Report 1:</b>	<b>Making it Past Elementary Education</b>
<b>Research Report 2:</b>	<b>Demographic Transition and Education Planning</b>
<b>Research Report 3:</b>	<b>Equity and Efficiency in Expansion of Secondary Schools</b>
<b>Research Report 4:</b>	<b>Efficient School Siting using GIS Modelling</b>
<b>Research Report 5:</b>	<b>Cost and Equity in Accessing Secondary Education</b>
<b>Research Report 6:</b>	<b>The Shifting Terrain of Government and Private Provision</b>
<b>Research Report 7:</b>	<b>Private Tuition: Extent, Pattern and Determinants</b>

RMSA TECHNICAL COOPERATION AGENCY

# PRIVATE TUITION: EXTENT, PATTERN AND DETERMINANTS

MARCH, 2016



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### Note on Documentary Series

A series of documents has been produced by RMSA Technical Cooperation Agency for the Government of India's programme to make good quality secondary education available, accessible and affordable to all young persons in the age group of 14-18 years.

The documentary series is arranged as follows:

RMSATCA 0	Programme Management Reports and Documents
RMSATCA 1	National Achievement Survey (Reports and Documents for Thematic Area 1)
RMSATCA 2	Teacher Management and Development (Reports and Documents for Thematic Area)
RMSATCA 3	School Standards, Evaluation and Development (Reports and Documents for Thematic Area 3)
RMSATCA 4	Data Management and Use (Reports and Documents for Thematic Area 4)
RMSATCA 5	Results Focused Planning (Reports and Documents for Thematic Area 5)
RMSATCA 6	Research (Reports and Documents for Thematic Area 6)
RMSATCA 7	Communication and Knowledge Management (Reports and Documents for Thematic Area 7)

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## Executive Summary

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Private tuition, or tutoring that supplements mainstream school education, is now a global phenomenon that continues to grow. It employs many people, in very informal settings as well as in organised tutoring centres. In India, the private tuition industry was estimated to be worth \$23.7 billion in 2013, and was projected to have reached \$40 billion in 2015. Private tuition has become so common that it is referred to as a third education sector, or the 'shadow education system'.

This rising demand for private tuition has clear implications for efforts to achieve equity in access to education and high levels of learning for all. However, equalisation of access to schooling alone, in the absence of good quality teaching and learning, is not enough. Access without quality, along with parents' wishes to give their children every advantage that they can, are key reasons for the growth in uptake of private tuition. Of note, parents of all socioeconomic levels are striving to provide their children with extra tuition. In some cases this supplements attendance at government schools which may be a cheaper option than sending a child to private school; while in other cases it is in addition to private school attendance, including attendance at very expensive and elite private schools.

This paper explores the degree of prevalence of private tuition, the profile of students who use it, and the reasons for accessing it - or the determinants of uptake of tuition. It is found that as the education levels rise, so too does use of private tuition. Particularly high numbers of secondary students use it in order to succeed in the final board examinations which determine successful completion of schooling and selection for further education or work opportunities. Upper primary students use less tuition than secondary students, while primary pupils use it the least. The key reasons for taking tuition surround the poor quality that many students are experiencing in mainstream schooling. Poor quality and the need for extra help to pass examinations (which are closely linked) are the key reasons cited.

Access to private tuition is found to be inequitable similarly to access to private schooling, as it is a market-based service entirely reliant on client fee payments. Therefore the poor and traditionally marginalised groups, and those living in rural areas, access it least, and spend the least when they do manage to access it. Those in the richest quintile by far outstrip the spending of all others, including those in the next richest quintile. For these families private tuition appears to be about maintaining privilege and status, and safeguarding access to better opportunities, while for the poor, who are usually accessing government schools, it is about 'topping up' the learning, or lack of learning, that takes place in government and low-fee private schools. Many of the poor do not access tuition at all, but there are many for whom private schooling is out of reach, while they can afford government schooling as well as some private tuition on top.

Patterns of access differ across states and between urban and rural areas, with demand for tutoring responding both to what is happening in mainstream schooling (for example if there is more or less private schooling in a given state), as well as levels of demand (which can be affected by the quality of mainstream school as well as numbers of parents who are able to pay). The need to pay for tuition in order to achieve necessary levels of learning adds an additional layer of inequity to the already expensive secondary education system.

Cost barriers in government secondary schools need to be reduced and quality needs to be improved from the earliest foundation years of the education system to eliminate the need for private tuition. In addition best practices could be widely publicised to ensure that students and parents are empowered, and to discourage school teachers providing paid tuition to their own students after

school hours. The sector is too large and so highly informal, meaning that strict regulation is all but impossible. In addition, the service is filling a need for those whose schooling is letting them down. The most equitable solution will be to obviate the need for tuition through good quality school education, creating something closer to a level playing field for all, including those too poor to pay for private tutoring.



# 1. Introduction

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Private tuition is a global phenomenon and has been steadily on the rise. The recent study by Global Industry analysis (2014) estimated that private tuition will be an industry worth US\$196.3 billion by 2020. In South Korea and Turkey household spending on private tuition has reached 2.1% and 1.44% respectively these countries' GDP. In India, the private tuition industry was estimated to be worth INR 2,370 crore in 2013, and was projected to have reached INR 4,000 crore in 2015 (ASSOCHAM, 2013). Countries such as China and Sri Lanka have also experienced similar rises in private tuition (Glewwe and Jayachandran, 2006), and this global growth has led some to consider it as a third emerging education sector, after traditional government and private schooling sectors (Dang and Rogers, 2008).

This rising demand for private tuition has clear implications for efforts to achieve equity in access to education and high levels of learning for all. However, equalisation of access to schooling alone, in the absence of good quality teaching and learning, is not enough. Access without quality, along with parents' wishes to give their children every advantage that they can, are key reasons for the growth in uptake of private tuition. Of note, parents of all socioeconomic levels are striving to provide their children with extra tuition. In some cases this supplements attendance at government schools which may be a cheaper option than sending a child to private school; while in other cases it is in addition to private school attendance, including attendance at private schools of all fee levels. It is important to gain an understanding of growth in private tuition, including an understanding of the profile of students who take private tuition, and the reasons for this. Therefore this paper explores the following questions. **First**, what is the extent and pattern of private tuition in India? **Second**, what are the reasons for private tuition? **Third**, what is the cost of private tuition and how does it vary by income group and caste? **Fourth**, what are the determinants of private tuition and household expenditure on private tuition?

Private tuition can be defined as fee-paying supplementary education that students take with the motivation to acquire subject knowledge to increase their educational chances in the formal system of education. Uptake of private tuition is prevalent in India and has been for some time. Particularly high numbers of secondary students use it in order to succeed in the final board examinations which determine successful completion of schooling, as well as university entrance and ultimately chances of gaining government employment.

This paper is organised into six sections. Section two reviews the literature and presents the issues surrounding private tuition. The sources of data and the methodology are presented in section three. Section four provides descriptive analysis of the extent and patterns of the private tuition, while section five presents the multivariate analysis answering the research questions. The final section provides policy-relevant conclusions.

## 2. Literature

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While education has long been viewed as a public good, it has also long been accepted to provide individuals with advantages in comparison with less-educated peers, meaning it is also a positional good (Jonathan, 1990). The benefits from consumption of positional goods are generally regarded as coming at the expense of the benefits of others (Adnett and Davies, 2010, p. 2), meaning that the purchase of private tuition for children can prove a parental strategy crucial in determining the position of their children relative to their peers.

In its role as a positional good, educational attainment acts as a screening tool for occupational selection of individuals (Ranson 1993), with both relative and absolute levels of education consumed proving important (Hirsch 1976). With those having higher levels of educational attainment enjoying higher private rates of return compared to those with lower levels of educational attainment, parents look to boosting their children's attainment as a way out of poverty.

The universalisation of schooling at any given level does not guarantee that everyone receives education of good quality (Mongan et al. 2011), leading to continuing stratification through the quality of schooling that children receive. Those receiving poor quality education are likely to end up with limited chances of attaining higher educational levels and subsequently finding good employment. In this reality, wealthier parents pay for private tuition to gain an edge over their peers and maintain their class advantage, while poorer parents use it to supplement the poor quality education their children experience in more affordable schools, government or private, in the hope that education will mean a way out of poverty.

The formal education sphere is highly competitive in many societies (Bray, 2003), meaning that tuition is sought to enable students to stay ahead of their peers. This is related to the 'Diploma Disease' (Dore, 1976) meaning the increasing importance attached to educational certificates for occupational selection. Dore argues that 'implicit in the diploma disease model is the assumption that employers use educational certificates primarily as 'screening' devices – as measures of general ability (intelligence and powers of application) which indicate a person's likely 'trainability' over a whole range of skills, rather than as indicators of the cognitive and other skills which he has acquired as 'human capital' through his schooling' (Dore, 1980, p. 3). The outcome is that more selection and competition brings with it higher demand for private tuition. This is particularly the case in recent years with mass education and the resulting credential inflation (Little 1997), meaning that higher educational achievement has become more important than ever before.

Private tuition, referred to by Bray (1999) as the 'shadow education' system, is a fee-based educational service, and can be provided by different types of service providers. The service is closely linked to the formal education system, aimed at helping students to meet its curriculum requirements. Private tuition is often provided by individuals, from secondary school pupils, university students, graduates and qualified teachers, to organised businesses and even chain businesses. It has gone from being seen as just a source of supplemental income for an educated (often young) person, to being a business in its own right, part of what is now a large-scale industry (Bray 1999). Increasing supply and demand each seem to be feeding growth in the other, and there is supply to meet all types of demand from the relatively poor who can still pay something, to the very wealthy. And while tuition traditionally has consisted of a tutor and anywhere from one pupil to many, the internet has enabled distance (online) tutoring, where a reliable internet connection is available.

Demand for private tuition also occurs due to factors beyond the control of the households, such as the high stakes attached to the outcomes of important examinations (Raffick, 2004). Selection and screening processes for opportunities beyond school that are based on examination results induces demand for private tuition even amongst those who otherwise would have little inclination for it. In India there has been a greater emphasis on physical access than on teaching quality, (Kingdon, 2005; Srivastava, 2006), with the ineffectiveness of the public education system identified as one of the major reasons behind the proliferation of private tuition (Silova and Bray, 2006; Kim and Lee, 2010). In this context, ensuring better educational opportunity for children falls back upon families. Baker et al. (2001) using UNESCO data, observed that private tuition is more common in countries with less public funding of education.

Whatever the driver for uptake of private tuition, evidence indicates that it does play a role in increasing learning levels and greater examination success. For example, Atherton and Aslam (2012) found positive effects from private tutoring on learning achievement in India; similarly in another study of Indian elementary-level pupils by Dongre and Tewary (2014). Alcott and Rose (2015), based on nationally representative data, found that private tuition improves learning for all children, from the poorest to the richest. The paper finds that poor government school pupils who received private tuition learned much more than their poor peers who did not receive tuition (Alcott and Rose, 2015, p.357). However they also found that tuition was not enough to close learning gaps that exist along socioeconomic or gender lines. Evidence from other countries has also found positive and significant effect of private tuition on learning levels (Dang 2007 in Vietnam; and Ono 2007 in Japan).

In terms of who is accessing private tuition, the evidence cited above finds that at least some children from all backgrounds are receiving it. However its prevalence varies by socioeconomic background, with more highly educated parents tending to regard it as a high priority (Kim and Lee 2004); while in Japan richer pupils are found to have a better chance of receiving private tuition than poorer peers (Stevenson and Baker 1992). At the same time, and congruent with Alcott and Rose's (2015) findings, some studies have found private tuition to be income elastic, implying that it may be viewed by households more as a necessity than as a luxury good (Tansel and Bircan 2006).

While the prevalence of private tutoring is well recognised, it needs still to be better researched and documented due to its significance to learning, as well as wider social outcomes. Firstly, as it is a purely market-based educational service, there are, as with private schooling, equity implications from those who can pay being able to purchase an advantage over the disadvantaged. This is especially the case where demand for tuition is greater in areas where government schooling is failing. Parents' need to spend money on this service negates the intended benefit of fee-free schooling (where this exists and at what levels), and adds to the often already onerous costs where schooling is not free, for example at the secondary level. Tuition may also have less economic pay-off for the poor, as these children tend not to make it to senior secondary school and beyond. Private tuition is more affordable to the wealthy, helping them to maintain their socioeconomic advantage. Rising demand for private tuition can also be considered an indication that mainstream education is failing to meet the needs of children, and also that there is increasing competition for higher schooling opportunities.

### 3. Data and Methodology

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The paper draws on both primary and secondary data sources to analyse the extent and patterns of uptake of private tuition, and determinants of who does and does not use it. The secondary data used in this paper includes National Sample Survey (NSS) 64<sup>th</sup> and 71<sup>st</sup> round unit level data. The primary data is from a survey conducted by RMSA Technical Cooperation Agency (TCA) in three states: Assam, Bihar and Odisha.

The NSS collected information from all those aged 5-29 years in the sampled households. As part of this survey eight households were selected from each sampled village and urban block for collecting information on participation and expenditure. For each sampled household, details were collected on all members such as age, sex, educational level attained, current attendance and enrolment status, etc. For persons aged 5-29 years, who formed the main target group of the survey, further information on current attendance and enrolment status in educational institutions was obtained.

The TCA case study data was collected between 2013 and 2015. This survey provides greater detail on three states, Assam, Bihar and Odisha. The sample includes data from 2500 households each in Bihar and Odisha and 3000 households in Assam. Descriptive analysis of this data provides key background to and informs the multivariate analysis that follows.

The determinants of private tuition status (whether a child is receiving this or not) were estimated using binary logistic regression using NSS 71<sup>st</sup> round unit level data. Logistic regression employs binomial probability theory in which there are only two values to predict: that probability ( $p$ ) is 1 rather than 0, i.e. the particular person belongs to one group rather than the other - in this case receiving private tuition or not receiving it. The independent variables include location, gender, caste, household disposable income, course fee, type of school attended, household level years of schooling, medium of instruction, and level of education attended. The probability of taking private tuition is then estimated using the formula given by Agresti and Finlay (1986, p, 580).

Logically, it is expected that the decision on how much to spend on private tuition is determined only when the decision is made to take private tuition. Further, the decision to take private tuition is itself determined by various socioeconomic factors which will lead some households to spend money on this area, and perhaps for certain children within the household, while others will not. For households that decide against private tuition the amount spent is necessarily zero while those who do choose to spend, can spend any amount. Ordinary least squares regression is commonly used in the literature, however the inclusion of both zero and positive values in this type of analysis can result in biased estimates. Tobit regression analysis is accepted as being the appropriate solution to analysing such data. By being able to take outcome variables ranging from zero upwards, the analysis is able to take into consideration firstly the decision whether or not to take private tuition, and secondly, the amount spent on private tuition. This method is able to avoid the possibility of inconsistent estimators due to the biases deriving from the endogenous selection of the sample.

## 4. Extent and Pattern of Private tuition in India

Private tutoring is a large and growing industry in India, estimated by the Asian Development Bank to be worth \$6.4 billion per year and growing at an annual rate of 15%. This section provides analysis of the extent and pattern of uptake of private tuition in India.

**Table 1: Percentage of secondary school students taking private tuition by school type and wealth quintile**

	2007-08			2014-15		
	Government	Aided	Private	Government	Aided	Private
<b>Q1 (Poorest)</b>	19	12	48	38	27	23
<b>Q2</b>	29	18	23	41	25	27
<b>Q3</b>	30	28	23	36	25	26
<b>Q4</b>	30	34	27	39	35	35
<b>Q5 (Richest)</b>	39	43	39	46	49	43
<b>Overall</b>	30	32	33	39	33	34
<b>Wealth inequality in participation (Q5-Q1)</b>	<b>20</b>	<b>31</b>	<b>-9</b>	<b>8</b>	<b>22</b>	<b>20</b>

Source: Estimates based on NSS 64<sup>th</sup> and 71<sup>st</sup> round unit level data

The proportions of students of different economic backgrounds and attending different types of schools taking private tuition has changed (and generally increased) over the years as shown in table 1. Of note, the percentage of government and aided school students taking private tuition has increased across income groups, with the share of the poorest students doubling between 2007-08 and 2014-15. The gap between percentage of students from richest economic groups and the poorest economic group has reduced significantly between the two time points. The measure of inequality, which is calculated by subtracting participation of student belonging to the poorest economic groups from participation of students belonging to the richest economic group, has shrunk from 20 points in 2007-08 to 8 points in case of students attending government schools

**Table 2: Percentage of secondary school students taking private tuition by caste and wealth quintile**

	ST	SC	OBC	Others	Caste inequality (Others-ST)
<b>Q1 (Poorest)</b>	14	36	35	53	39
<b>Q2</b>	18	35	37	53	35
<b>Q3</b>	21	29	32	41	20
<b>Q4</b>	21	32	36	46	25
<b>Q5 (Richest)</b>	29	44	41	51	22
<b>Overall</b>	19	34	35	48	29
<b>Wealth inequality in participation (Q5-Q1)</b>	<b>15</b>	<b>8</b>	<b>6</b>	<b>-2</b>	

Source: Estimates based on 71<sup>st</sup> round unit level data

The percentages of students taking private tuition by caste and income group is reported in table 2 and indicates that those of more privileged castes ('others') are far more likely than less advantaged groups to access private tuition, even in the poorest 40% of households. The proportions of scheduled tribe (ST) children receiving tuition are very low in comparison with other groups, and even the richest ST children receive tuition much less frequently than the poorest 'other backward castes' (OBC) children. For ST children twice as many rich as poor children access tuition, while the difference between rich and poor is less stark for all other caste groups. The inequality in participation in private

tuition between the richest and the poorest student is low across all caste groups and negative in case of children from upper caste.

**Table 3: Percentage of secondary school students taking private tuition**

	Rural			Urban		
	Government	Aided	Private	Government	Aided	Private
<b>Q1 (Poorest)</b>	38	22	23	40	51	25
<b>Q2</b>	40	21	21	45	45	44
<b>Q3</b>	35	17	20	43	38	36
<b>Q4</b>	36	25	26	49	45	46
<b>Q5 (Richest)</b>	38	37	34	56	56	48
<b>Overall</b>	37	23	25	47	47	45

Source: Estimates based on 71<sup>st</sup> round unit level data

Predictably, the prevalence of private tuition is much higher in urban than rural areas, with over 20 percentage points' difference for aided and private school students, but only 10 points' difference for those attending government schools (table 3). This rural-urban divide applies across income quintiles, however rural areas see less disparity in access across income levels than in urban areas. Of note, in rural areas government school pupils are considerably more likely to be taking private tuition than those at other types of schools, while there is very little difference overall by school type in urban areas.

**Table 4: Percentage of secondary school students taking private tuition by gender, location and income quintile**

	Urban		Rural	
	Female	Male	Female	Male
<b>Q1 (Poorest)</b>	35	43	33	36
<b>Q2</b>	45	44	35	37
<b>Q3</b>	38	42	30	30
<b>Q4</b>	46	47	30	34
<b>Q5 (Richest)</b>	51	53	35	38
<b>Overall</b>	45	47	32	34
<b>Wealth inequality in participation (Q5-Q1)</b>	16	10	2	2

Source: Estimates based on 71<sup>st</sup> round unit level data

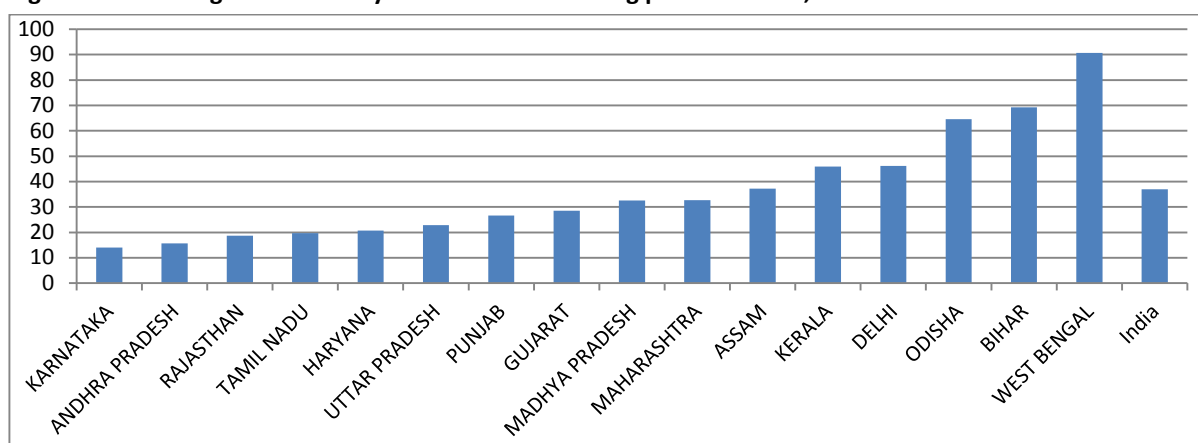
The gender difference in the percentage of students taking private tuition is observed to be low in both rural and urban areas (overall), but there is quite a large difference between poor, urban boys and girls. By far the greatest use of private tuition is made by rich, urban male students (table 4). The wealth related inequality in attending private tuitions in the rural area is low compared to urban area when disaggregated by gender. This inequality increases from 2 points for male and female in rural area to almost 16 points in case of urban girls and 10 points in case of urban boys. The higher use more generally amongst urban students may reflect issues to do with both supply, with more educated people in urban areas offering private tuition, as well as demand, with fewer families in rural areas having the disposable income necessary to pay for private tuition.

**Table 5: Percentage of students taking private tuition by level of education and wealth quintile**

	Primary	Upper primary	Secondary
<b>Q1 (Poorest)</b>	17	21	35
<b>Q2</b>	21	27	37
<b>Q3</b>	22	25	32
<b>Q4</b>	24	28	37
<b>Q5 (Richest)</b>	28	34	45
<b>Overall</b>	22	26	37

Source: Estimates based on 71<sup>st</sup> round unit level data

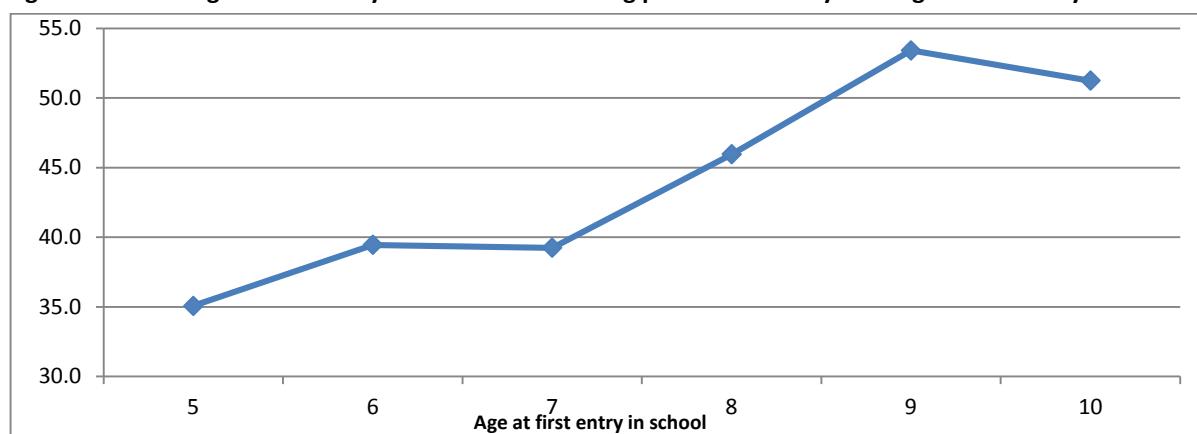
Table 5 shows that with each higher level of schooling, use of private tuition rises, with the largest increase (of 11 percentage points) between elementary and secondary levels, as compared to just four points between primary and upper primary levels. The greater uptake of private tuition at the secondary level is indicative of the increasing difficulty of the curriculum (and possibly the poor levels of learning attained at lower schooling levels), as well as the much higher stakes attached to examinations at this level. With regard to wealth gaps, there are at least 10 percentage points' difference between the richest and the poorest children, with the gap fairly constant across levels.

**Figure 1: Percentage of secondary school students taking private tuition, selected states**

Source: Estimates based on 71<sup>st</sup> round unit level data

Figure 1 reports the greatly varying percentages of secondary school students taking private tuition in a selection of states. The range is from as low as 14% in Karnataka, up to 91% in West Bengal. Bihar (at 69%) and Odisha (at 65%) have the next highest percentages.

Of note, there appears to be a fairly strong relationship between a child's age of first entry into school and their use of private tuition later on, at the secondary level (figure 2). As another report from this series has found, delayed entry into school has serious consequences for transition to secondary level and is associated with other forms of educational disadvantage, which may lead to these children requiring extra help more than those who started school at the correct age. The percentage of students taking private tuition is observed to vary between 35% for those who entered in school at the right age of 5 to over 50% amongst students entering school aged 9 or 10 years i.e. being overage by at least 3-4 years.

**Figure 2: Percentage of secondary school students taking private tuition by their age at first entry into school**

Source: Estimates based on 71<sup>st</sup> round unit level data

Table 6 provides insight into the subject areas where secondary school students are the most likely to require extra support. Unsurprisingly mathematics, followed by sciences are the key subjects where private tuition is sought, followed by English. Nearly all surveyed secondary school students in Odisha were taking private tuition for mathematics and 95% of students were also getting extra help for sciences. Assam sees the lowest incidence of private tuition in all subjects, but in particular in language (but not including English).

**Table 6: Percentage of secondary school students taking private tuition by subject**

	English	Language	Mathematics	Science	Social Science
<b>Bihar</b>	78	56	95	89	65
<b>Assam</b>	67	15	81	60	40
<b>Odisha</b>	94	83	99	95	84
<b>Total</b>	77	53	92	83	63

Source: TCA school survey

What is particularly striking is the frequency with which secondary school students are receiving private tuition. As shown in table 7, the vast majority of sampled young people in TCA case study states take private tuition every day, with this practice being nearly universal in Odisha. Assam is the only state where a sizeable quarter of students take tuition less often but still frequently at 2-3 times per week. Encouragingly, the vast majority of tutors that children are receiving help from are graduates or post-graduates (table 8). Overall, 95% tutors have at least graduation degree across all survey districts.

**Table 7: Frequency of private tuition sessions for secondary school students**

	Each day	Two or three times a week	Once a week	Few times a month	Other
<b>Bihar</b>	96.1	2.7	0.5	0.4	0.2
<b>Assam</b>	47.7	27.1	12.9	4.9	7.5
<b>Odisha</b>	99.5	0.0	0.0	0.5	0.0
<b>Total</b>	83.2	9.1	3.9	1.6	2.2

Source: TCA household survey



**Table 8: Educational qualification of private tutors of secondary school students**

	Assam	Bihar	Odisha	Overall
High school	4	0	2	1
Intermediate	3	3	7	3
Graduate	68	79	67	74
Post graduate	25	18	24	21

Source: TCA household survey

Of great concern is the key driver behind the demand for private tuition in TCA case study states, the poor quality of education on offer at school, which was cited 61% of the time (table 9). This is allied with the second largest issue cited in 24% of cases: that private tuition is necessary to pass examinations. This should not be the case where schools are providing education of at least an acceptable quality. Therefore it can be said that the vast majority, or 85%, of the demand for tuition is driven by low (clearly insufficient and unacceptable) levels of learning in schools. In Bihar, 96% of demand is driven by these factors, while in Assam and Odisha there is more peer-pressure or rather a demonstration effect that appears to lead people to feel it is just what everyone does.

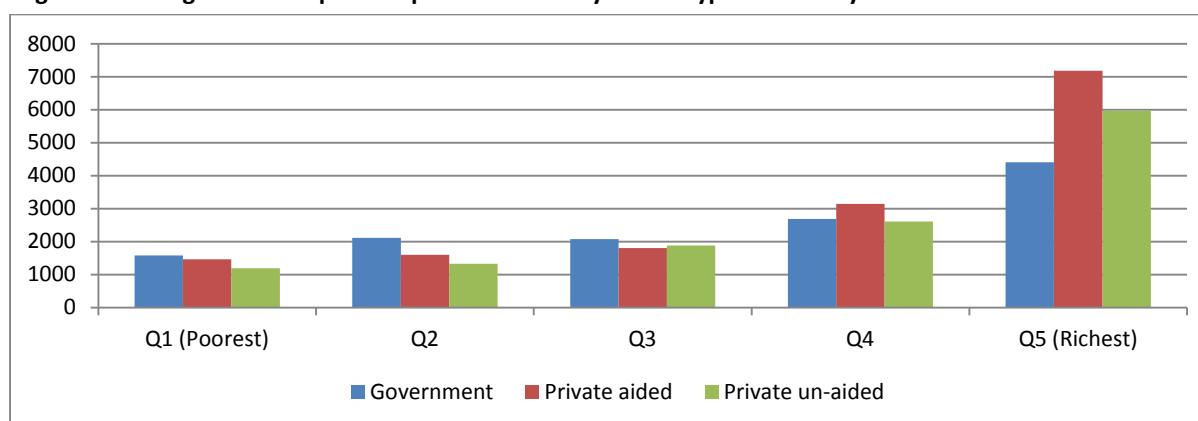
**Table 9: Reasons for secondary school students' taking private tuition**

	Assam	Bihar	Odisha	Overall
School poor quality	28.8	82.5	41.5	61.2
School teacher insisted	6.3	0.0	9.5	3.2
All children take it	25.3	4.1	14.3	11.6
To pass the exam	39.6	13.4	34.7	24.0

Source: TCA household survey

## 4.1 Cost of attending private tuition

As already noted above, private tuition is estimated to be a \$50 billion industry, and one that is growing fast. With so much to be earned in this 'third sector', this section examines what the cost to households is. As with other educational costs, what households pay tends to vary with their ability to spend, and on average, those in the poorest quintile of wealth tend to spend somewhere around one quarter of what the richest households spend (figure 3).

**Figure 3: Average amount spent on private tuition by school type-Secondary level**

Source: Estimates based on 71<sup>st</sup> round unit level data

It is noteworthy that for households in the poorest 60%, those accessing the cheapest secondary school option, a government school, spend the most on tuition as compared to those accessing aided or private schools. In conjunction with the key drivers of demand cited above, the indication is that the poor who must choose the cheapest schooling option are being failed by the education system

and are further disadvantaged by having to spend scarce resources on private tuition. Furthermore, families in the poorest quintile accessing private schools are still having to spend on private tuition, as also found by Alcott and Rose (2015). This as an additional schooling cost is onerous, and it is only in the richest quintile of wealth that household spending on private tuition for those accessing both types of non-government provision clearly outstrips the spending of those accessing government schools.

**Table 10: Average expenditure in Indian Rupees on private tuition by level of education and wealth quintile**

	Primary	Upper Primary	Secondary
<b>Q1 (Poorest)</b>	482	822	1541
<b>Q2</b>	655	1042	1963
<b>Q3</b>	840	1183	1995
<b>Q4</b>	1094	1629	2757
<b>Q5 (Richest)</b>	2092	3446	5785

Source: Estimates based on 71<sup>st</sup> round unit level data

Average spending by wealth quintile (table 10) shows that at every schooling level, as wealth increases, so too does expenditure on private tuition, with richest families spending around four times as much as poor families. By far the largest jump is between the fourth and richest quintiles, with the richest families spending approximately twice what families in quintile four spend. The increases in spending from quintiles one to four are relatively modest in comparison, except for the jump from quintiles three to four at the secondary level. The average expenditure on private tuition at the secondary level more than twice that at the primary level for students across all wealth groups. State specific figures are provided in annex table 25.

**Table 11: Expenditure on private tuition for secondary school students as a percentage of annual household consumption expenditure**

	ST	SC	OBC	Others	Overall
<b>Government</b>	1.6	2.9	2.2	3.5	2.7
<b>Private aided</b>	1.3	2.1	2.1	4.4	3.1
<b>Private un-aided</b>	1.7	2.4	1.9	2.9	2.5
<b>Overall</b>	1.6	2.7	2.1	3.4	2.7

Source: Estimates based on 71<sup>st</sup> round unit level data

Expenditure on private tuition as a percentage of the annual household income by social group and school type is reported in table 11. Overall households spend 2.7% of income on private tuition, but as in most other issues, the lowest level is found for ST families, who spend just 1.6%, and the advantaged castes spend considerably more, at 3.4%, of already larger total incomes. Of note, across the three more disadvantaged caste groups, those accessing government schools spend more than their peers accessing aided or private schools.

**Table 12: Expenditure on private tuition for secondary school students as a percentage of annual household consumption expenditure**

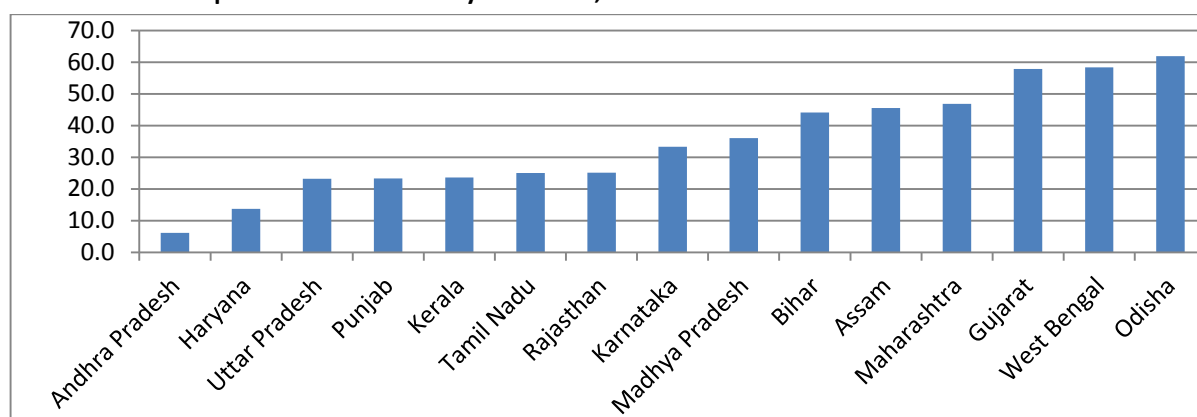
	Q1 (Poorest)	Q2	Q3	Q4	Q5 (Richest)
<b>Government</b>	4.0	3.8	2.8	2.7	2.3
<b>Private aided</b>	4.2	2.7	2.6	2.9	3.0
<b>Private un-aided</b>	6.2	3.1	2.7	2.4	2.6
<b>Overall</b>	4.2	3.6	2.8	2.7	2.6

Source: Estimates based on 71<sup>st</sup> round unit level data

Private tuition constitutes a significant proportion of annual household expenditure across the wealth groups (table 12). However by far the largest burden falls on the poorest households, with at least 4%

of expenditure dedicated to private tuition, and up to 6.2% for those already paying for private schooling. It may be that spending is so high in this group as these poorest households whose children have managed to transition to secondary school are likely to be the most motivated families, willing to invest significantly to ensure that their children complete the cycle. The percentages spent are still high for quintile two families, with the proportions far more manageable for all richer households.

**Figure 4: Average household expenditure on private tuition for secondary school students as a percentage of total household expenditure on secondary education, selected states**



Source: Estimates based on 71<sup>st</sup> round unit level data

As with enrolment in private schools, uptake of and expenditure on private tuition varies greatly by state (figure 4), and it is noteworthy that in states with lower shares of private schooling, the share of spending on private tuition is higher. For example where only 6% of average expenditure on a secondary school student in Andhra Pradesh goes to private tuition, 43% of students attend private schools. Conversely, West Bengal which has the lowest share of private school has one of the highest shares of household spending on private tuition, at 58%.

**Table 13: Sub-components of educational expenditure for secondary school students as a percentage of average education expenditure**

	Course Fee	Books, Stationery & Uniform	Transport	Private tuition	Other Expenditure
<b>Government</b>	15	36	7	36	7
<b>Private aided</b>	40	23	9	22	5
<b>Private un-aided</b>	57	18	9	13	4
<b>Overall</b>	41	24	9	21	5

Source: Estimates based on 71<sup>st</sup> round unit level data

Table 13 presents expenditure on different heads as a percentage of average (total) secondary school expenditure by type of school attended. It is observed from the table that the overall share for the course fee in expenditure is 41%, while expenditure on private tuition constitutes 21%. However the picture is very different in terms of proportions, depending on school type. For those accessing government schools the fee is a fairly small 15%, while materials and private tuition take the largest shares at 72% combined. As already stated, those families accessing government provision lose any benefit of the lower school fees where they must purchase private tuition to make up for poor quality teaching. For non-government schools the school fee makes up by far the largest cost in secondary schooling.

## 5. Determinants of Private Tuition

While previous studies have found that students belonging to more advantaged groups have a higher chance of receiving private tuition as compared to more marginalised peers, few studies have attempted systematically to examine the determinants of uptake of private tuition. Following the methodology outlined above, we first fit four models of these key determining factors using binary logistic regression (table 14). A full model was set up for all children attending any level of schooling and then three separate models were setup for children attending primary, upper primary and secondary levels.

**Table 14: Binary logistic regression analysis of the determinants of uptake of private tuition at all schooling levels**

	Overall		Primary		Upper primary		Secondary	
Private tuition	Estimate	Z-score	Estimate	Z-score	Estimate	Z-score	Estimate	Z-score
Location (rural=1)	-0.5	-16.6*	-0.6	-10.8*	-0.7	-8.5*	-0.5	-6.8*
Age at first entry in school	0.0	1.0	0.0	1.1	0.0	0.2	0.1	1.0
Reference category=Other caste								
ST	-0.8	-11.5*	-0.8	-6.2*	-0.7	-4.7*	-0.8	-5.5*
SC	-0.2	-3.8*	-0.2	-2.2**	-0.1	-1.2	-0.2	-2.0**
OBC	-0.1	-1.6	0.0	-0.6	0.0	-0.5	0.0	0.4
Household size	0.0	-5.0*	-0.1	-4.0*	-0.1	-2.3**	0.0	-2.2**
Gender (Male=1)	0.2	7.7*	0.2	3.9*	0.3	4.2*	0.2	3.1*
log Annual disposable income	0.3	11.9*	0.2	5.5*	0.3	5.1*	0.3	6.1*
Household level mean years of schooling	0.0	-1.0	0.0	-3.0*	0.0	0.1	0.1	4.4*
Log Course fee	0.0	0.6	0.1	5.5*	0.1	3.3	0.0	-0.8
Reference category=Primary								
Upper primary	0.2	4.7*						
Secondary	0.7	14.9*						
Higher secondary and above	0.0	-0.8						
Reference category=Government schools								
Private aided	0.1	3.0*	0.2	1.8	0.1	0.8	0.1	1.3
Private un-aided	0.0	-0.4	-0.2	-1.9	-0.1	-0.5	0.1	0.4
Other	0.1	0.3	0.1	0.3	0.0	0.1	-0.8	-0.8
Log scholarship amount	0.0	1.6	0.0	0.3	0.0	1.9	0.0	0.2
Institute type*Log of scholarship amount								
private aided	-0.0	-2.9*	-0.1	-1.3	0.0	-1.2	0.0	-0.3
private un-aided	-0.1	-4.6*	0.0	0.1	0.0	-0.3	0.0	-0.1
not known	-0.4	-2.7*	0.0		0.0		0.0	
Regular wage earning	0.1	4.0*	0.2	2.6*	0.1	0.7	0.1	1.3
Medium of instruction (English=1)	0.1	3.3*	0.1	1.0	0.0	-0.1	-0.1	-0.5
Intercept	-3.8	-14.7*	-3.9	-8.3*	-4.4	-7.1*	-4.1	-6.4*
Pseudo R2	0.17		0.16		0.25		0.21	
No. of observation	74402		19718		11805		11262	

Source: Estimate based on NSS 71st round unit level data \*

Compared to students in urban areas, those in rural areas are less likely to take private tuition; as noted above this is likely to be linked to lack of supply of suitable tutors and lack of sufficient income (enabling effective demand) in rural areas. There are also large differences in probabilities between caste groups. For example, ST and SC students are less likely to take private tuition than those in more privileged castes, while OBC students are less likely to take private tuition the effect is not statistically significant. Disadvantages often overlap, with (for example), many ST communities being highly rural, compounding social and location-related disadvantages. There is a clear gender bias with regard to uptake of private tuition, with boys more likely than girls to receive this.

In terms of household-related factors, unsurprisingly those students from larger households are less likely to take private tuition due to there being fewer resources to be dedicated to each child in education; while conversely the higher the disposable income of the household, the much greater chance of a student receiving private tuition. The higher the mean years of schooling of household members, the greater the chance of a student receiving private tuition at the secondary level but not at the primary and the upper primary level. This relationship indicates that more educated households are more likely to provide extra support to children's education, and it may also be a function of having a higher household income.

With regard to school-related issues, the level of school fee paid is found to have a statistically significant positive effect on the chance of receiving private tuition at the primary level, this could be true for those attending private primary schools. As compared to primary schooling, the chance of taking private tuition was much higher for upper primary level students while the chances for secondary school students is even higher, most likely due to the higher stakes attached to board examinations. Concerning school type, the relationship with chances of attending private tuition is weak except in case of private aided schools where children attending those have greater chances of taking private tuition as compared to government schools children, most likely due to the poor quality on offer at these schools. Also those at English medium schools are more likely to receive private tuition.

The relationship between receiving scholarships and using private tuition is statistically insignificant and when the interaction terms were introduced with the type of schools a child is attending the relationship becomes complex. As compared to government school children, those attending private aided and unaided schools are less likely to attend private tuition if they are receiving scholarship. This could be related to the nature of the scholarship in these school which probably is determined by good academic performance.

## 5.1 Interaction between government school and scholarship amount

During our field visit of Bihar government schools it was observed that a large number of students were absent during the school time to attend private tuitions. When asked about the source of financing these tuition, a significant number of those stated that the scholarships they were receiving was used to finance these tuition costs. In order to further understand the relationship between the scholarships and an uptake of private tuition, particularly for government school children, a separate model was setup for those children who have received any form of scholarship. A separate model was also setup for children attending at the secondary level who have received scholarship. Table 15 introduces another regression analysis that investigates the relationship between enrolment in government schools and the amount of scholarship received, and its effect on uptake of private tuition. The model includes the interaction variable of enrolment in government schools and the amount of scholarship received to find out if scholarship recipients for children enrolled in government schools have higher chances of taking private tuition compared to scholarship recipients enrolled in non-government schools. The story is very similar to the one discussed above hence here we will focus on the effect of scholarship for those children who are enrolled in government schools. Government school children are less likely to attend private tuition however there is a positive interaction effect of enrolment in government school and the amount of scholarship received, meaning that for every unit increase in the amount of scholarship received, the chances of taking private tuition increases amongst the student enrolled in government school compared to students

enrolled in other school type. In effect, this indicates that the scholarship frees up household resources that can then be dedicated to private tuition.

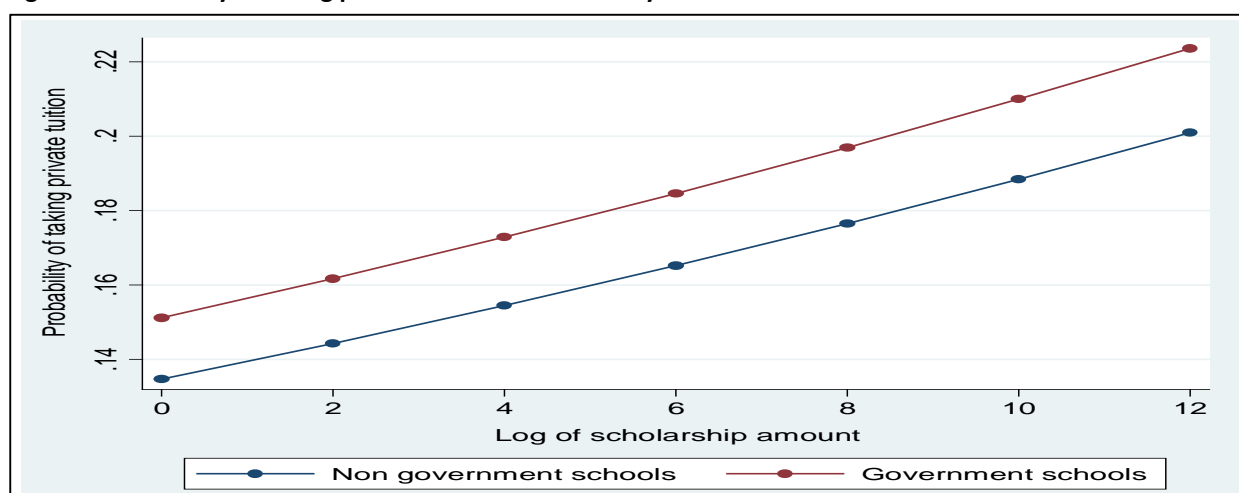
**Table 15: Regression model for those who have got the scholarship**

	Overall		Secondary	
Private tuition	Estimate	Z-score	Estimate	Z-score
Location (rural=1)	-0.28	-3.57*	-0.63	-3.24*
Government school	-3.35	-7.15*	-2.47	-1.75
Log scholarship amount	-0.31	-4.86*	-0.31	-1.67
Government school*log scholarship amount	0.51	7.61*	0.33	1.57
Age of first entry	0.01	0.39	0.03	0.56
<b>Reference category=Other caste</b>				
ST	-1.44	-9.57*	-1.45	-3.41*
SC	-0.60	-4.71*	-0.64	-1.59
OBC	-0.18	-1.46	-0.29	-0.74
Household size	-0.04	-2.15**	-0.06	-1.23
Gender (Male=1)	0.33	4.52*	0.07	0.45
log Annual disposable income	0.37	6.1*	0.58	3.95*
Household level mean years of schooling	0.06	3.09*	0.08	1.69
Regular wage earning	0.07	0.71	-0.34	-1.57
Medium of instruction (English=1)	-0.21	-1.75	0.24	0.78
<b>Reference category=Primary level</b>				
Upper primary	0.07	0.53		
Secondary	0.54	3.06*		
Higher secondary and above	-0.21	-0.83		
<b>Intercept</b>	-2.82	-4.29*		
<b>Pseudo R2</b>	0.21		0.3	
<b>No of observation</b>	16900		2352	

Source: Estimate based on NSS 71<sup>st</sup> round unit level data

The differential effects are best illustrated using figures 5 and 6. The model without the interaction effect (figure 5) allows the intercept term to vary by group and assumes the slope to remain constant. This implies a uniform gain or disadvantage for members of both groups where students enrolled in government and non-government schools have the same growing probability of taking private tuition for every unit increase in the amount of scholarship received.

**Figure 5: Probability of taking private tuition for secondary school students without the interaction effect**

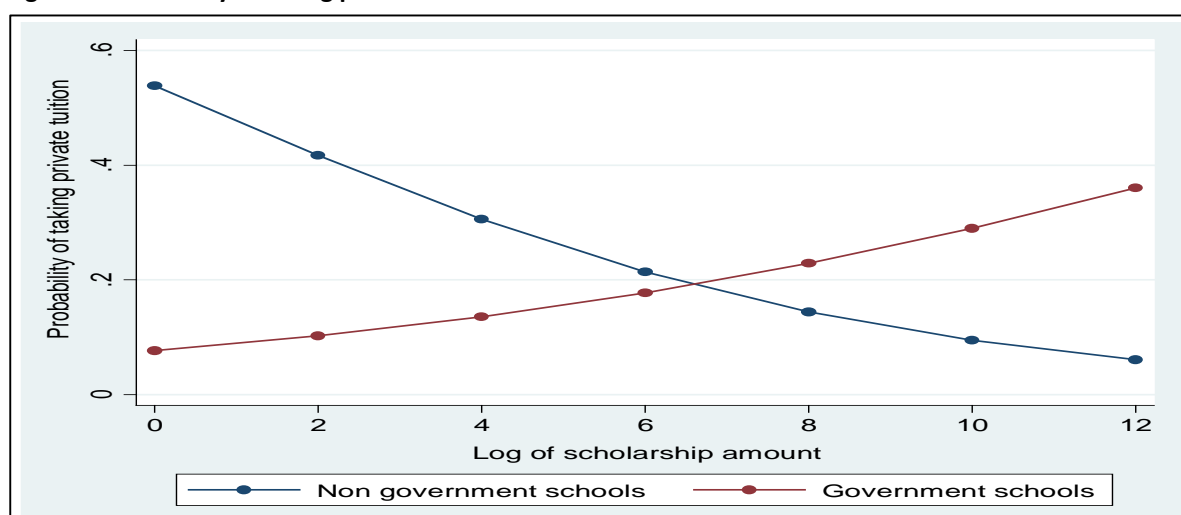


Source: Estimate based on NSS 71<sup>st</sup> round unit level data

Figure 6 presents the predicted chances of taking private tuition with the interaction effect of enrolment in government school and amount of scholarship received. The interaction effect between government schools and scholarship amount is observed to be positive and statistically significant. As shown in figure 6, the probability of non-government school students decreases as the amount of the scholarship increases. At the lowest level of scholarship the probability of non-government school student's probability of attending private tuition is nearly four times as it was before introducing interaction term. At the highest level of scholarship, probability of private school student taking private tuition lowers to around 0.1 which is half of what it was when the interaction term was not introduced.

An introduction of the interaction term has not only impacted the slope but also the intercept. The important aspect to note from figure 6 is that where the probability of taking private tuition for students enrolled in government school increases, the probability of taking private tuition amongst the students enrolled in non-government schools decreases with every unit increase in amount of scholarship received by the students (figure 6).

**Figure 6: Probability of taking private tuition with the interaction effect**



Source: Estimate based on NSS 71st round unit level data

## 5.2 Determinants of private tuition expenditure

Table 16 reports the determinants of the amount of expenditure on private tuition, with model 2 being restricted to children receiving scholarship at the secondary level. Models are estimated using the Tobit regression and the sample includes only students who are currently attending private tuitions. The estimated models explain modest variation in expenditure by the households which is reflected by the  $R^2$  values of 0.37 in model 1 and 0.38 in model 2.

**Table 16: Tobit regression analysis of private tuition expenditure for students at all levels**

	Model 1		Model 2	
Log of private tuition expenditure	Estimate	Z-score	Estimate	Z-score
Location (rural=1)	-0.03	-0.87	-0.03	-1.03
Age of first entry	0.04	16.89*	0.04	17.23*
<b>Reference category=Other caste</b>				
ST	-0.21	-6.76*	-0.22	-6.85*
SC	-0.29	-9.30*	-0.3	-9.41*
OBC	-0.03	-0.82	-0.04	-1.15
Household Size	-0.17	-18.32*	-0.17	-18.50*
Gender (Male=1)	-0.01	-0.24	0.01	0.21
Log annual disposable income	0.34	75.36*	0.34	75.30*
Household level mean years of schooling	0.06	14.44*	0.06	14.10*
<b>Reference category=Primary level</b>				
Upper primary	3.37	111.10*	3.36	110.10*
Secondary	3.26	102.46*	3.21	100.49*
Higher secondary	3.58	99.69*	3.52	97.62*
Course Fee	0.16	31.74*	0.15	28.78*
Aided school	3.68	91.82*	3.64	86.07*
Private school	3.51	109.31*	3.52	103.20*
Government school	4.06	105.90*	2.73	62.96*
Log Scholarship amount	0.03	5.44*	-0.05	-8.36*
Government school*Log Scholarship amount	0.15	0.01	0.2	29.76
Regular wage earning (Yes=1)	0	0.01	0	0
Medium of instruction (English=1)	0.2	4.93*	0.17	4.30*
Intercept	-4.25	-90.47*	-3.36	-71.19*
Pseudo R2	0.37		0.38	

Source: Estimate based on NSS 71st round unit level data

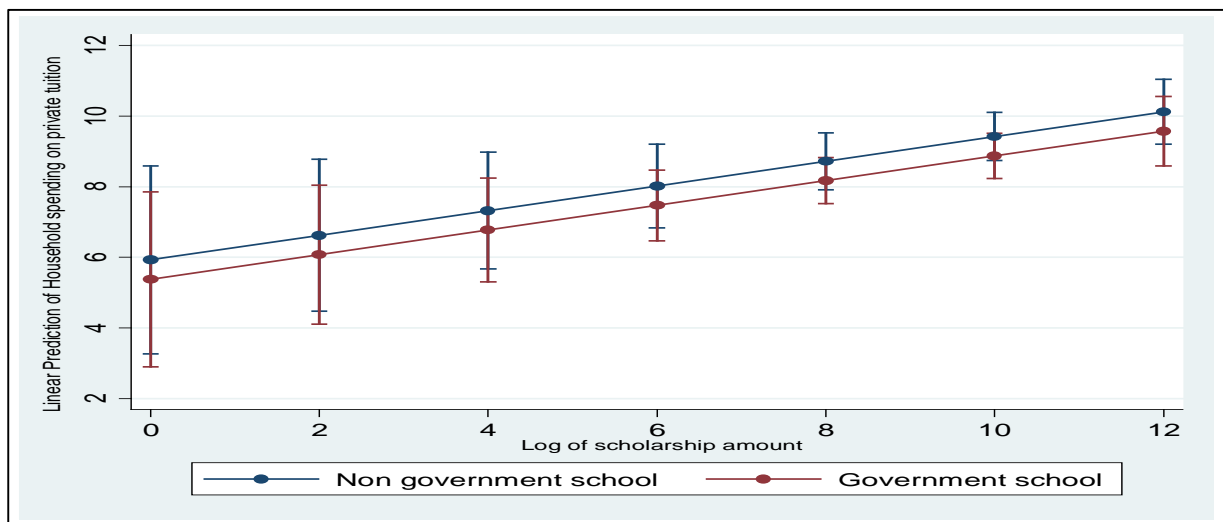
Households in rural area are observed to spend less on private tuition compared to households in urban areas, a finding consistent with the preceding analysis above however this location effect is insignificant. Many rural dwellers also experience other forms of disadvantage; many of the most marginalised group, STs, live in rural communities. Expenditure is considerably less in ST, SC and OBC households as compared to more privileged caste groups, expenditure for ST and SC students is significantly less than for children from other castes. Uptake of private tuition is lower amongst these groups, poverty as well as rural residence is common, and therefore expenditure tends to be lower. Such families also tend to have more children, and an increase in the size of the household is found to have a statistically significant negative effect on expenditure, with more children meaning that family resources become more stretched. The age of school entry of the students is positively (and statistically significantly) linked to expenditure on private tuition, which indicative of the fact that children who enter school late have greater difficulty in managing curriculum as against their counterparts who started at the right time. For every one year increase in the age of the student, expenditure increases by 0.04 SD. As with the previous models, the higher the level of education, the higher the expenditure on private tuition; with students in English medium schools also being associated with higher spending on private tuition.



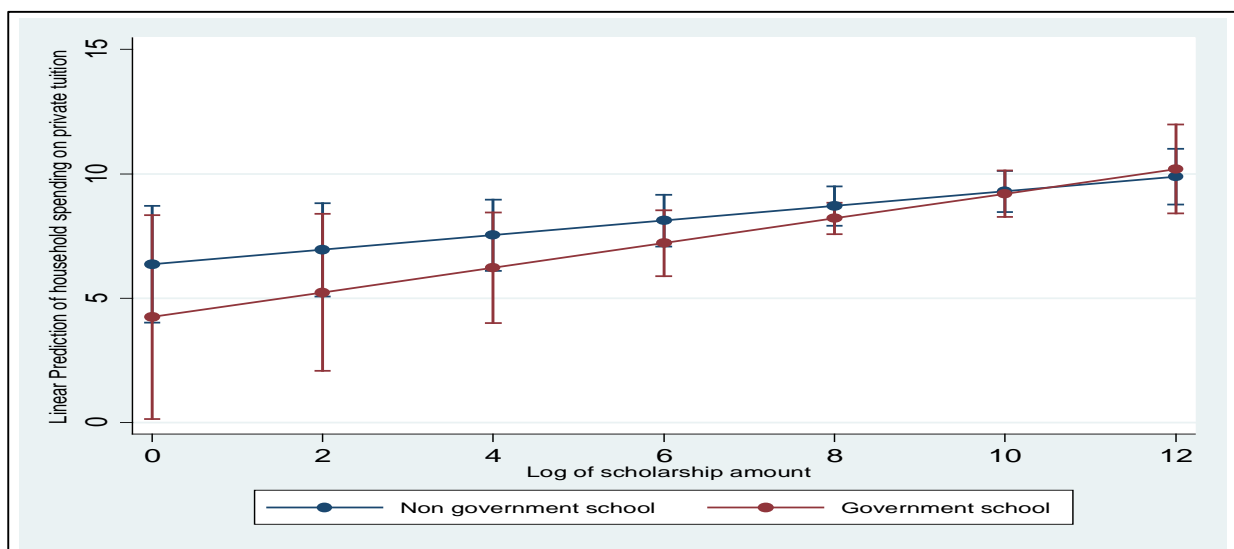
Once again we find that the higher the mean years of schooling for household members, the higher the expenditure on tuition; this relationship is also positive and statistically significant. The amount spent increases by 0.06 SD with every year increase in the mean years of schooling of household members. In a related vein, yet again the disposable income of the household has a strong positive effect on expenditure on private tuition. A unit increase in the annual disposable income of the household significantly increases this expenditure.

Figure 7 presents predicted expenditure on private tuition for students attending government and non-government schools. It indicates that there is a uniform difference in the household spending on private tuition between students enrolled in government and non-government schools with expenditure of students attending government schools to be lower. The difference between the two groups diminishes at a higher level of scholarship, with the introduction of the interaction term between school type and the scholarship amount, as shown in figure 8.

**Figure 7: Linear prediction of private tuition expenditure for all students without the interaction effect**



**Figure 8: Linear prediction of private tuition expenditure with the interaction term**



## 6. Conclusion

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While much progress has been made in Indian education, there are still major challenges to be met. While there is much greater progression through the system than a decade ago, considerable inequity is still present. Public provision has opened doors, however the quality of teaching at government schools remains low. Many of those who can afford to do so have abandoned the government system for private provision instead. However this is a costly option, closed to roughly half of society (the poorer half).

In this context, as in many other settings worldwide, private tuition has grown up as a 'third sector' or 'shadow education system'. It is used by all groups within society: the wealthy use it in the face of increasing competition for higher educational opportunities and to gain better examination results for job selection, essentially to protect their places of privilege. However the poor tend to use it more as a top-up to the quality of education their children receive, most often at government schools, or cheaper, lower-quality private schools. Particularly at the secondary level the cost of private schooling is prohibitive for so many, while government provision is much more affordable. Where the quality of teaching is perceived to be low, and in particular when students enter the high-stakes realm of the board examination, then uptake of private tuition increases.

Analysis for this paper has concluded that for many households, private tuition is considered to be a necessity. This situation has serious implications for educational equity when the worst-off (including traditionally marginalised castes and tribes) are not even accessing secondary school, and the worst-off that do transition to secondary are likely to receive the lowest quality education with no private tuition, while those who can pay gain the advantage that comes from extra teaching. All government school students, and those marginalised young people attending government schools using scholarships, tend to access private tuition more than other students (enrolled in non-government schools). The richest children receive the most private tuition, and their parents spend very large amounts to access the best possible service, thus safeguarding their social, economic and educational advantages.

Private tuition in India is now an industry of staggering size, and is growing every year. The forms of provision, from one-on-one or small group tutoring in a house, to group tutoring in organised business premises, to online mass (or individual) tutoring, are also growing and evolving. This phenomenon is here to stay, and is providing much needed support to many students who have likely been let down by the quality of teaching at all levels of education, leading to increasing struggles as curricular content becomes more and more challenging, and the stakes become higher and the investment by their parents is greater. Policy responses are needed to ensure that where families cannot afford private tuition, students will not be disadvantaged and left behind. Furthermore, steps should be taken so that already poor families are not made poorer by the need to pay for private tuition. In addition, the sector is currently unregulated, mostly to do with the highly informal nature of a large proportion of the industry, meaning that there are no assurances of high quality instruction in private tutoring contexts.

## 6.1 Some suggested actions and policy responses:

- To formulate an appropriate policy response, more needs to be **researched and documented** on private tuition. The sector spans the highly informal to the organised and high-tech, but not enough is known concretely.
- The **quality of teaching and learning in government (and private) schools needs to improve**, as there should be no need for private tuition where mainstream education is of acceptable quality. Interventions to improve schooling quality must start at the earliest levels, pre-primary and the early primary grades, to ensure strong foundations for all future learning. Many of the older students finding themselves increasingly in need of supplemental tutoring today will have been failed early on, and continually, by poor quality elementary education.
- Greater **remedial support should be provided in schools** (after the main school day has ended or during the day) for difficult subjects such as mathematics and science, particularly for learners who are making slow progress.
- Similarly, greater support should be given to students preparing for high stakes board examinations.
- **Streaming by ability groups** may in certain cases allow for students who are struggling to get more attention in groups of similar ability peers, however evidence on the effectiveness of streaming is inconclusive.
- **States should arrive at context-relevant responses** which should also be related to policies regarding mainstream private schooling. The two issues appear to be related, though with an inverse relationship: those states with more private schooling tend to have less private tuition, and vice versa.
- **Guidelines for best practice in private tuition should be developed and publicised** throughout the schooling system. As the sector is too large and with too many informal elements to effectively regulate it, informing parents, students and school management on best practices and unethical behaviour may be the most effective approach. For example, all stakeholders should continually reinforce the message that no teacher should be tutoring, for an extra fee, students that they teach during the day at a main-stream school, and no teacher should pressure students to take up private tuition.

## 7. Reference

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## 8. Annexure

**Table 17: Percentage of student taking private tuition by income group and state-2014**

	Q1 (Poorest)	Q2	Q3	Q4	Q5 (Richest)
A & N Islands	0.0	0.0	32.6	78.1	30.9
Andhra Pradesh	16.8	15.4	10.5	22.6	14.8
Arunachal Pradesh	1.4	2.3	15.1	14.9	18.7
Assam	32.3	32.6	35.4	47.0	47.4
Bihar	62.2	76.8	68.1	68.0	71.6
Chandigarh			0.0	94.7	88.9
Chhattisgarh	3.5	2.2	15.2	42.5	67.5
D & N Haveli		0.0	0.0	0.0	58.4
Daman & Diu	0.0	0.0		32.1	13.5
Delhi	100.0	0.0	6.2	39.3	57.9
Goa	100.0	59.2	60.4	23.3	41.7
Gujarat	2.6	19.8	24.3	28.0	43.4
Haryana	0.0	10.3	19.3	24.4	26.3
Himachal Pradesh	5.2	0.8	7.6	6.1	38.1
Jammu & Kashmir	21.4	33.8	30.6	50.3	29.7
Jharkhand	30.4	69.8	49.0	61.0	56.3
Karnataka	5.8	7.1	14.6	13.5	36.1
Kerala	36.0	48.3	43.3	48.5	45.2
Lakshadweep	0.0	0.0	18.1	29.1	0.0
Madhya Pradesh	26.3	27.1	30.1	40.5	47.3
Maharashtra	7.1	25.0	21.9	35.9	55.3
Manipur	33.7	39.4	51.5	79.6	80.2
Meghalaya	7.8	7.3	12.7	6.5	25.6
Mizoram	0.0	0.0	11.5	0.0	3.2
Nagaland	0.0	0.0	6.0	17.8	12.8
Odisha	60.6	60.6	68.8	83.6	83.7
Puducherry	0.0	10.1	17.2	49.9	43.8
Punjab	0.0	9.1	24.6	20.0	37.2
Rajasthan	5.9	12.1	20.7	19.8	22.2
Sikkim	91.7	14.8	19.9	9.0	39.2
Tamil Nadu	12.1	14.5	17.1	22.5	31.1
Telangana	0.0	3.3	9.6	8.1	9.2
Tripura	89.2	90.6	86.4	89.6	97.6
Uttar Pradesh	10.3	17.6	17.6	30.0	41.7
Uttaranchal	7.1	20.3	15.8	30.8	4.6
West Bengal	80.5	95.6	94.0	91.2	94.1
India	35.4	37.3	32.4	37.3	45.2

Source: Estimate based on NSS 71<sup>st</sup> round unit level data

**Table 18: Percentage of student taking private tuition by caste and state-2014**

	ST	SC	OBC	Others
A & N Islands	24.9		74.6	29.4
Andhra Pradesh	1.1	1.3	25.9	14.8
Arunachal Pradesh	11.6	0.0	0.0	3.1
Assam	36.5	25.2	45.0	35.4
Bihar	82.9	62.8	70.9	69.7
Chandigarh		80.8	68.2	90.7
Chhattisgarh	3.1	4.1	17.8	33.1
D & N Haveli	0.0	0.0		61.5
Daman & Diu	0.0	0.0	16.2	100.0
Delhi	60.5	30.8	37.3	52.8
Goa	48.4	48.4	50.3	38.5
Gujarat	25.4	10.0	21.2	48.5
Haryana	0.0	8.9	28.9	20.2
Himachal Pradesh	0.0	4.6	12.7	12.2
Jammu & Kashmir	9.5	41.5	22.8	41.2
Jharkhand	31.6	63.8	58.6	65.2
Karnataka	14.9	16.8	11.4	16.8
Kerala	30.7	39.0	46.1	49.9
Lakshadweep	14.7			
Madhya Pradesh	8.5	34.7	35.8	44.3
Maharashtra	5.8	23.8	32.1	41.7
Manipur	44.5	100.0	65.5	95.2
Meghalaya	9.9	0.0	0.0	24.0
Mizoram	3.8			0.0
Nagaland	10.5	0.0	0.0	0.0
Odisha	28.1	63.4	74.2	83.2
Puducherry		13.5	33.3	
Punjab	0.0	8.6	20.5	41.5
Rajasthan	9.5	19.9	23.0	17.1
Sikkim	7.4	96.7	34.6	25.3
Tamil Nadu	0.0	15.5	21.2	41.9
Telengana	0.0	1.5	7.8	11.6
Tripura	86.4	82.7	94.3	95.0
Uttar Pradesh	8.9	14.9	21.6	33.3
Uttaranchal	0.0	9.1	22.7	20.2
West Bengal	72.3	88.7	91.7	94.0
India	19.4	33.9	35.4	47.6

Source: Estimate based on NSS 71<sup>st</sup> round unit level data

**Table 19: Percentage of student taking private tuition by location, gender and state**

	Urban	Rural	Female	Male
A & N Islands	52.6	29.3	36.8	43.2
Andhra Pradesh	18.5	14.2	11.1	18.9
Arunachal Pradesh	26.0	6.9	10.7	8.7
Assam	51.3	35.4	35.2	39.0
Bihar	67.4	69.5	69.2	69.4
Chandigarh	83.9	41.1	88.5	78.2
Chhattisgarh	50.0	6.6	7.6	16.6
D & N Haveli	20.5	0.0	26.1	0.0
Daman & Diu	53.9	0.9	22.9	19.6
Delhi	45.1	80.8	46.4	46.0
Goa	49.0	29.4	46.3	39.4
Gujarat	44.4	18.5	27.8	28.9
Haryana	26.4	18.9	16.4	25.3
Himachal Pradesh	25.4	7.8	12.0	7.0
Jammu & Kashmir	57.5	30.4	34.1	34.0
Jharkhand	72.6	46.0	46.1	57.6
Karnataka	27.4	6.3	14.4	13.6
Kerala	57.1	38.4	45.8	45.9
Lakshadweep	21.7	0.0	29.6	1.2
Madhya Pradesh	45.3	27.0	30.0	34.7
Maharashtra	48.9	21.3	36.8	29.2
Manipur	69.7	55.7	54.7	65.0
Meghalaya	37.4	5.9	15.0	7.7
Mizoram	4.8	3.0	2.1	5.4
Nagaland	30.4	5.0	8.7	11.2
Odisha	75.6	62.7	61.0	67.9
Puducherry	42.5	0.0	16.9	37.4
Punjab	39.8	18.9	21.6	30.5
Rajasthan	28.8	15.9	19.3	18.3
Sikkim	56.0	17.0	13.2	33.0
Tamil Nadu	33.5	8.2	19.2	20.1
Telengana	7.8	5.8	3.5	8.5
Tripura	86.6	89.8	90.0	88.6
Uttar Pradesh	37.1	18.6	14.0	30.0
Uttaranchal	36.3	14.4	13.1	21.1
West Bengal	93.1	89.7	93.0	88.0
India	46.1	33.3	35.8	37.8

Source: Estimate based on NSS 71<sup>st</sup> round unit level data



**Table 23: Percentage of students taking private tuition by level of education and States**

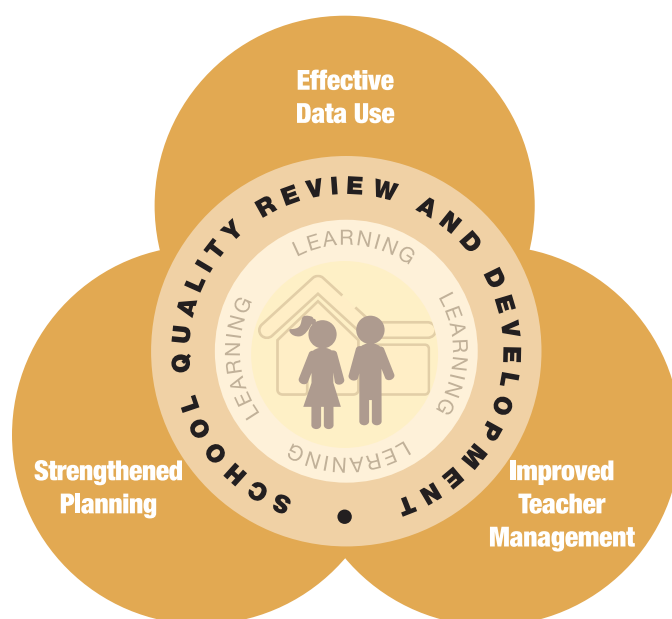
	Primary	Upper primary	Secondary
A & N Islands	26.0	28.1	39.9
Andhra Pradesh	10.5	13.3	15.6
Arunachal Pradesh	7.3	2.7	9.7
Assam	8.7	16.6	37.3
Bihar	43.5	50.3	69.3
Chandigarh	47.5	46.1	83.2
Chhattisgarh	6.0	5.6	12.5
D & N Haveli	18.5	20.5	14.4
Daman & Diu	66.5	51.6	21.5
Delhi	33.9	41.2	46.2
Goa	14.8	23.8	43.1
Gujarat	17.3	15.3	28.5
Haryana	10.4	16.0	20.7
Himachal Pradesh	3.2	7.0	9.2
Jammu & Kashmir	30.1	28.0	34.0
Jharkhand	28.6	35.2	52.1
Karnataka	14.0	11.7	14.0
Kerala	21.7	28.3	45.9
Lakshadweep	2.5	17.0	14.7
Madhya Pradesh	11.3	14.5	32.5
Maharashtra	20.6	22.2	32.7
Manipur	32.1	36.4	60.9
Meghalaya	3.6	5.3	11.4
Mizoram	1.7	1.7	3.8
Nagaland	2.3	2.9	10.0
Odisha	43.8	45.3	64.6
Puducherry	31.8	26.3	27.8
Punjab	20.0	22.6	26.6
Rajasthan	4.6	6.5	18.7
Sikkim	6.5	8.1	22.7
Tamil Nadu	22.0	19.0	19.7
Telengana	5.2	6.7	6.5
Tripura	77.6	83.8	89.2
Uttar Pradesh	10.8	12.4	22.8
Uttaranchal	16.8	13.5	18.2
West Bengal	67.0	86.8	90.7
India	21.7	26.4	36.9

Source: Estimate based on NSS 71<sup>st</sup> round unit level data

**Table 24: Average annual expenditure on private tuition**

	Primary	Upper Primary	Secondary
A & N Islands	1646	1792	4292
Andhra Pradesh	305	409	531
Arunachal Pradesh	1126	729	2063
Assam	515	893	2228
Bihar	1016	1478	2367
Chandigarh	2048	2615	7652
Chhattisgarh	322	490	1168
D & N Haveli	1359	1527	3508
Daman & Diu	3340	3274	2522
Delhi	1943	3658	4926
Goa	1938	1766	5464
Gujarat	2144	2279	5162
Haryana	616	1219	1674
Himachal Pradesh	587	1111	1635
Jammu & Kashmir	840	1254	1887
Jharkhand	636	911	1452
Karnataka	1096	1364	2252
Kerala	656	1129	2199
Lakshadweep	300	1123	1128
Madhya Pradesh	1063	1227	2137
Maharashtra	1273	1881	4827
Manipur	1023	1714	3427
Meghalaya	804	1949	3208
Mizoram	169	230	529
Nagaland	394	415	1417
Odisha	1356	1926	3271
Puducherry	928	1252	2616
Punjab	1325	1562	3141
Rajasthan	601	1107	1883
Sikkim	570	922	2134
Tamil Nadu	1006	1371	1894
Telengana	195	338	208
Tripura	2464	3059	5106
Uttar Pradesh	481	681	1512
Uttaranchal	1852	2736	2499
West Bengal	1760	2967	5002

Source: Estimate based on NSS 71<sup>st</sup> round unit level data



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